

What is claimed is:

1. An adaptive equalizer comprising:

5 a first correlation section that calculates a cross-correlation between inputs of a received signal converted to a baseband signal and a known signal of said received signal which is known to a receiver before the reception;

10 a second correlation section that calculates a correlation inverse matrix created from auto-correlation values obtained between said known signals;

15 a matrix calculation section that receives the output of said first correlation section and the output of said second correlation section as inputs and carries out a matrix multiplication;

a selection section that selects the output of said matrix calculation section and the output of said first correlation section;

20 a correlation window size control section that changes the correlation window size of said first correlation section; and

25 a transmission path situation decision section that decides the situation of the transmission path from the information indicating the previous reception performance and generates respective control signals indicating whether or not to cause said correlation window size control section to change the correlation window

size, which output should be selected by said selection section and whether or not to cause said matrix calculation section to carry out a calculation operation.

- 5    2.    The adaptive equalizer according to claim 1, wherein said transmission path situation decision section comprises a comparison section that compares previous reception performance with a predetermined threshold and decides the situation of the transmission path.

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3.    The adaptive equalizer according to claim 1, wherein said transmission path situation decision section comprises:

15        a comparison section that compares the previous reception performance with predetermined two different thresholds; and

20        a decision section that decides the situation of the transmission path according to the previous decision result when the previous reception performance can be decided to be positioned between said two thresholds from the output of said comparison section.